Exercise 1:
Give a formal proof for the correctness of the solution of the string matching problem which uses a suffix tree for the considered text string.

Exercise 2:
Construct an example where the node $s(v)$ has an outgoing edge with the first symbol of its marking is $g \in \Sigma$ but the node $v$ has not such an edge.

Exercise 3:
Prove Lemma 2.2 of the lecture.

Exercise 4:
Develop an linear time algorithm which, given a suffix tree for the string $x\#$, constructs a suffix tree for $x$. 